

Stormwater Utility & Water Utility Charges & Rates

October 20, 2015

Agenda

- Fiscal Policies/Goals
- System Development Charge
- Stormwater Utility Charges & Rates
- Water Utility Charges & Rates

Fiscal Policies/Goals

- Cover operation and maintenance expenses
- Cover debt service
- Maintain reserves for system replacement
 - Stormwater annual contribution – 75% of annual depreciation (2015 installation value)
 - Water annual contribution – 50% of annual depreciation (2015 installation value)
- Growth pays for impacts on the utility
- System additions funded by bonds and/or grants
- Maintain existing rate structures

System Development Charge (SDC)

- Charge is paid at time of building permit issuance
- One-time charge
- Charge is based on value of existing and planned facilities that benefit new customers
- Stormwater Utility currently charges \$500/ERU
- Water Utility currently charges \$2,888/ERU

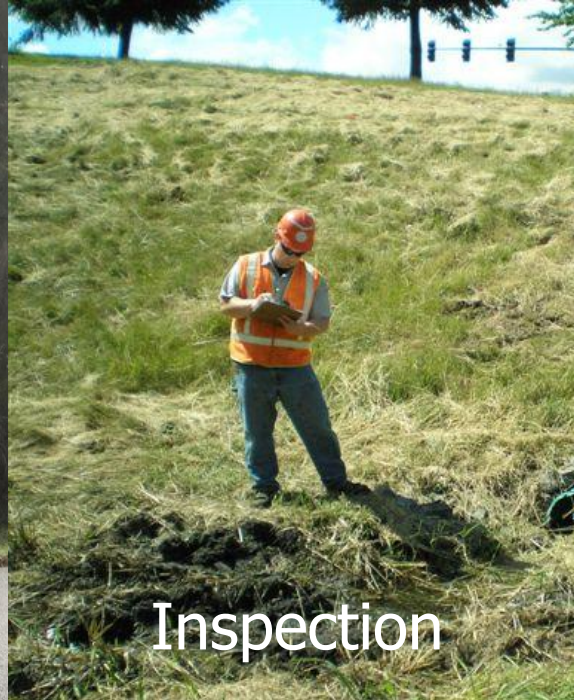
Stormwater Utility Rates and Charges

Stormwater Utility Charges and Rates

- System Overview
- Proposed System Development Charge Increase
- Revenue Requirements
- Proposed Rates
- Rate Comparison
- Recommendations



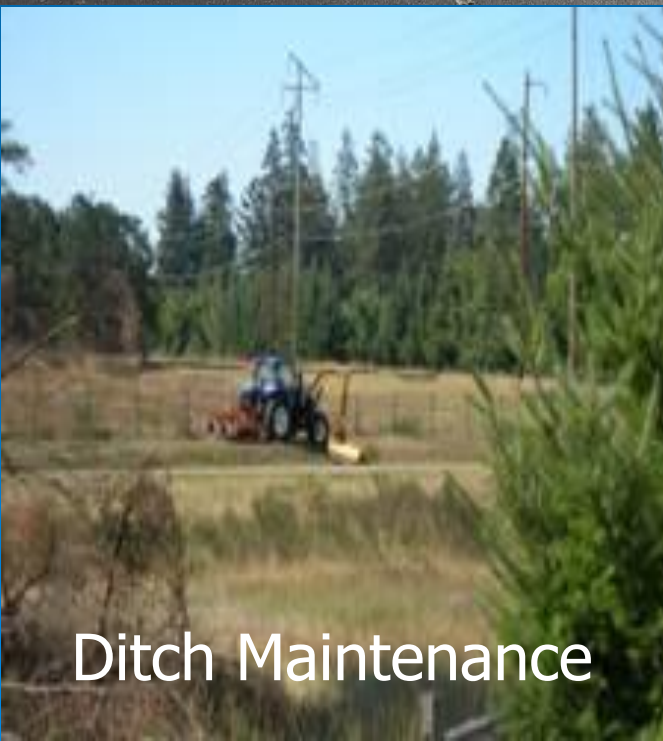
Street Sweeping



Inspection



Pond Maintenance



Ditch Maintenance



Cleaning a storm drain at Chloe Clark.
Vactoring Catch Basins

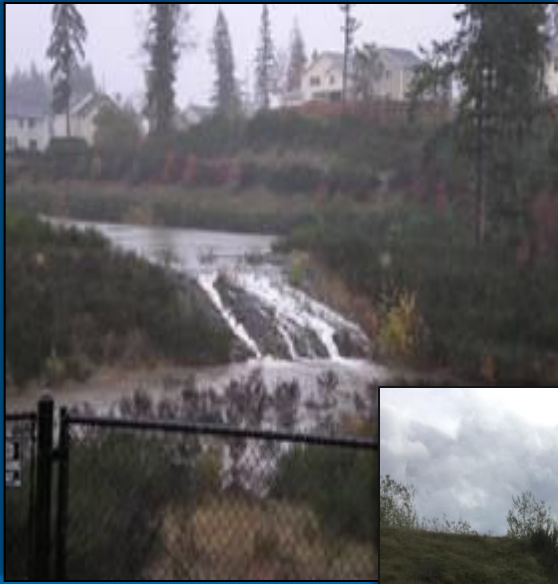


Education

Implementation of NPDES Phase 2 Requirements

- Inspection and maintenance of public/private facilities
- Inspection, monitoring, and remediation of illicit discharges
- Public education on stormwater pollution prevention
- Annual reporting to Ecology

Repairs



Spillway Repair at the Village II Division V
Storm Water Facility (near Jensen Ave,
Wallace St, Ogden Ave)



Culvert Damage at Sequalitchew Creek
Trail

Inventory of Existing Stormwater Facilities

Catch Basins	1,717
Length of Pipe (8"–60")	28.5 miles
Length of Ditches	6 miles
Water Quality/Infiltration Facilities (Public/Private)	21/23

Rate Structure

Equivalent Residential Unit (ERU)

=

1,900 sf of Impervious Area

Rates and Charge Summary

Account Type	Description	ERU Factor	2015	2020
1	Non-Single-Family, 100-year	0.5	\$7.65	\$7.96
2	Non-Single-Family, 25-year	0.65	\$9.95	\$10.35
3	Cleared and Compacted	0.33	\$5.05	\$5.25
4	ERU (no discount)	1	\$15.30	\$15.92
	System Development Charge		\$500	\$1000

SDC – Existing Facilities

Component	Installed Value
Pipes >12"	\$11,338,534
Catch Basins	\$ 2,402,319
Less Debt	+\$ <u>0</u>
Subtotal	\$13,740,853
Total, Existing ERUs ⁽¹⁾	÷ <u>7,903</u>
SDC, Existing Facilities	\$ 1,739

(1) Does not include cleared and compacted ERUs.

Staff recommends increasing SDC to \$1,000/ERU

Stormwater SDC Comparison

Entity	ERU (sf)	SDC/ERU
DuPont (proposed)	1,900	\$1,000
Gig Harbor	2,200	\$1,770
Lacey	N/A	N/A
Olympia	2,528	$\$1,190 + 2.1 \cdot \text{ADT}$
Pierce County	2,640	N/A
Puyallup	2,800	\$1,760
Steilacoom	2,500	\$325
Thurston County	3,600	N/A
Lakewood	2,640	N/A
Yelm	N/A	N/A

(1) SDC assumes single family with 10 Average Daily Traffic.

Stormwater Rates

Rate Assumptions

Growth	1.7%
Inflation	2.3%
Interest	0.2%
COLA	3%
Excise Tax	1.5%
Utility Tax	10%
Insurance	4%
FTE, 2016	1
SDC	\$1,000
Cash Balance, Min.	25 % of O&M

2016 – 1 FTE

➤ Duties and Tasks

- Dedicated staffer to conduct inspection of the City's stormwater facilities.
- Coordinate inspection of privately-owned stormwater facilities
- Record stormwater facilities' conditions and identify maintenance work
- Permit tracking and compliance
- Direct outreach education

Capital Improvement and Planning Projects (2016–2020)

Project		Year Planned	2015 Cost
1.	Edmond Village Swale Rehabilitation	2016	\$169,200 ⁽¹⁾
2.	Center Drive/Sequalitchew Creek Ditch Rehabilitation	2016	\$168,000 ⁽²⁾
3.	Edmond Village Pump and Electrical Upgrades	2016	\$40,000
4.	Bob's Hollow Lane Swale Rehabilitation	2017	\$182,000
5.	Aldrich Place Swale Rehabilitation	2017	\$182,000
6.	Public Works Facility Storm System	2018	\$1,172,000 ⁽³⁾
7.	Kittson Street Pipe Adjustment	2018	\$320,000
8.	Hoffman Hill Development Div. 5 Stormwater Facility Rehabilitation	2018	\$200,000
9.	El Rancho Madrona Catch Basin Improvements	2020	\$200,000
10.	Stormwater Pond Security Upgrades	2020	\$250,000
11.	Barksdale Station Drywell Replacement	2020	\$250,000
Total, 2016 - 2020			\$3,391,200

(1) Funded by Department of Ecology Grant – City share is \$42,300

(2) Funded by Department of Ecology Grant – City share is \$42,000

(3) Funded by Revenue Bond

Reserves Contribution System Replacement Value

Description	Replacement Value	2015 Replacement Value Annual Depreciation
Catch Basins	\$ 3,368,787	\$ 67,376
Pipes (8"–60")	\$13,338,018	\$177,840
Water Quality/Infiltration Facilities	\$ 2,293,443	\$ 45,868
Annual Depreciation	\$19,000,248	\$291,084

Reserves Contribution

Year	Depreciation Transfer (75% of 2015 installation costs)	Other Capital Reserves Transfer
2015	\$0	\$1,500,000 ⁽¹⁾
2016	\$218,314	\$0
2017	\$224,863	\$0
2018	\$231,609	\$0
2019	\$238,558	\$0
2020	\$245,714	\$0

(1) One-time initial transfer

Stormwater Fund End-of-Year Balance

Year	Cash	Reserves
2015	\$558,751	\$1,500,000
2016	\$611,087	\$1,732,114
2017	\$563,885	\$1,720,457
2018	\$564,963	\$1,289,723
2019	\$443,931	\$1,666,281
2020	\$327,739	\$971,358

Proposed Monthly Rate

	2015	2016	2017	2018	2019	2020
Rate/ERU	\$15.30	\$15.30	\$15.30	\$15.30	\$15.61	\$15.92
Percent Increase	0%	0%	0%	0%	2%	2%

Proposed Sample Bimonthly Bill

Property Owner	No. of ERUs	ERU Factor	Bimonthly ⁽¹⁾		
			2015 Rate	2020 Rate	Difference
State Farm (Type 2)	399	0.65	\$7,936	\$8,258	\$322
Intel (Type 1)	1,375.5	0.5	\$21,045	\$21,898	\$853
Chloe Clark Elementary School (Type 1)	61.5	0.5	\$941	\$979	\$38
Girl Scouts of Western Washington (Type 1)	34.5	0.5	\$528	\$549	\$21
DuPont Post Office (Type 4)	14.5	1	\$444	\$462	\$18
Blackhawk Condo Association (Type 4)	76.5	1	\$2,341	\$2,436	\$95
Single-Family Resident (Type 4)	1	1	\$30.60	\$31.84	\$1.24

(1) Billing cycle is bimonthly.

Stormwater Monthly Rate Comparison

Entity	ERU (sf)	Single Family	Sample Commercial ⁽³⁾	Discount
DuPont (existing)	1,900	\$15.30	\$107.10/\$53.55 ⁽¹⁾	Yes ⁽¹⁾⁽²⁾
DuPont (prop. 2020)	1,900	\$15.92	\$111.44/\$55.72 ⁽¹⁾	Yes ⁽¹⁾⁽²⁾
Gig Harbor	2,200	\$12.56	\$75.36	No
Lacey (existing/2019)	N/A	\$8.75/ \$11.36	\$29.45/ \$38.23	Yes ⁽¹⁾⁽²⁾
Olympia	2,528	\$11.79	\$33.24	Yes ⁽²⁾
Pierce County	2,640	\$9.08	\$53.80	Yes ⁽¹⁾
Puyallup	2,800	\$22.01	\$110.05	Yes ⁽²⁾
Steilacoom	2,500	\$16.00	\$83.20	No
Thurston County	3,600	\$7.17	\$21.10	No
Lakewood	2,640	\$6.45	\$33.19	Yes ⁽²⁾
Yelm	Unit	\$2.50	\$5.20	Yes ⁽²⁾

(1) Discount for on-site facilities must demonstrate on-site facilities meet or exceed City's requirements.

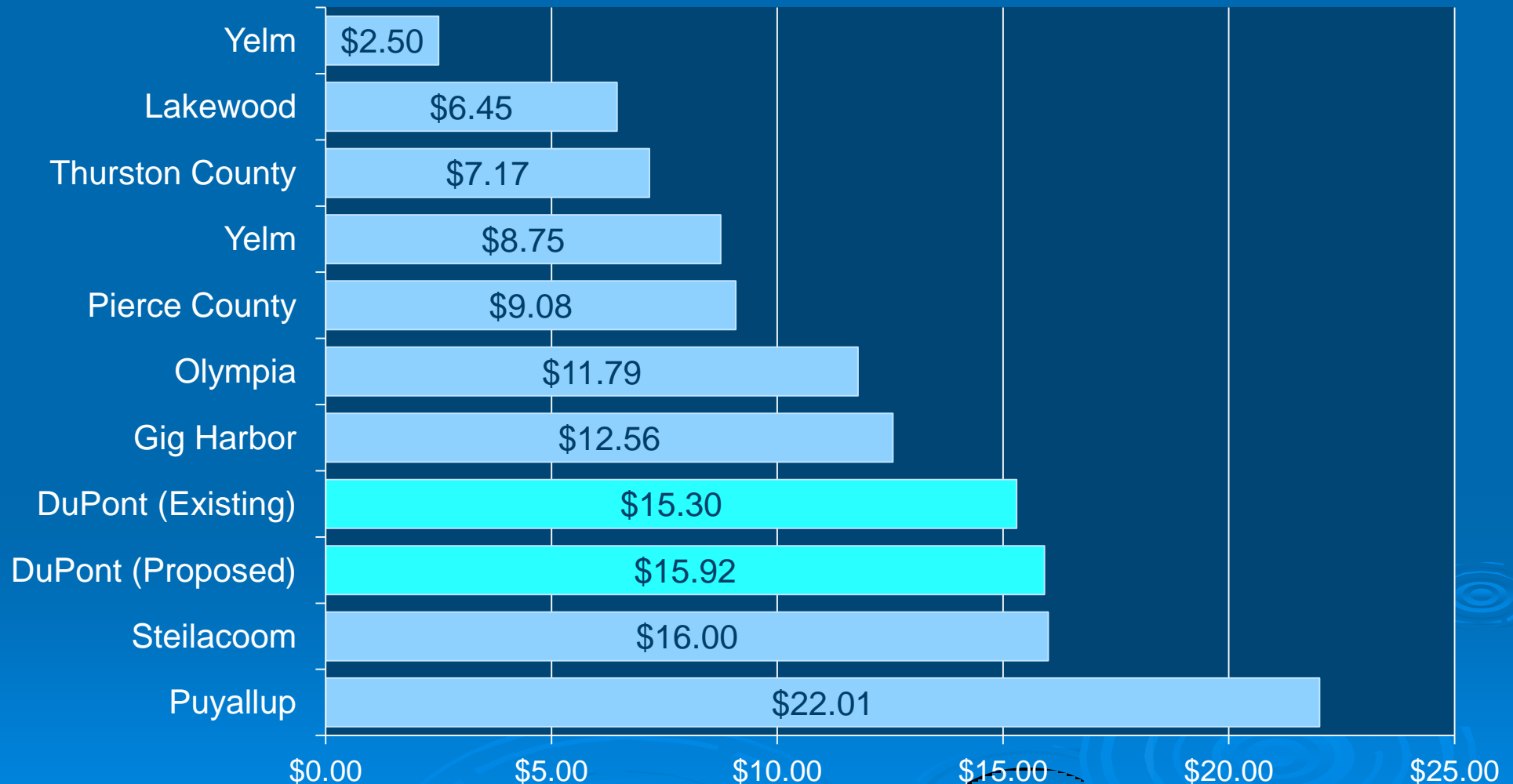
(2) Discount for low-income disabled and low-income seniors must meet City's requirements.

(3) Commercial monthly rate determined using 22,000 sf lot with 13,000 sf impervious surface.

(4) Commercial rate structure is variable and normalization of rate is not possible.

Stormwater Rate Comparison 2015

Monthly Single Family Rates



Stormwater Utility Recommendations

Council to Confirm

- Adopt proposed SDC increase from \$500 to \$1,000 in 2016
- Adopt proposed rate increases in 2019 and 2020
- Adopt rates for 2016–2020

Water Utility Charges and Rates

Water Utility Charge and Rate

- System Overview
- Lane v. Seattle (2008)
- System Development Charge
- Revenue Requirements
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Source



Storage



Distribution

Inventory of Existing Water Facilities

Water Mains (6"–16")	48.2 miles
Valves (6"–16")	1,337
Hydrants	448
Meters	3,096
Reservoirs	2
Wells	5
Booster Stations	2

Lane v. City of Seattle (2008)

Public fire protection, through fire hydrants, is a governmental function to be paid out of general revenue.

Fire Protection Expenses

- 50% of Costs Associated with Hydrants
- 50% of Costs Associated with 6" Water Main and Valves to Hydrants
- 21% of Costs Associated with Storage (Reservoirs)

Estimated Annual Fire Protection Expenses

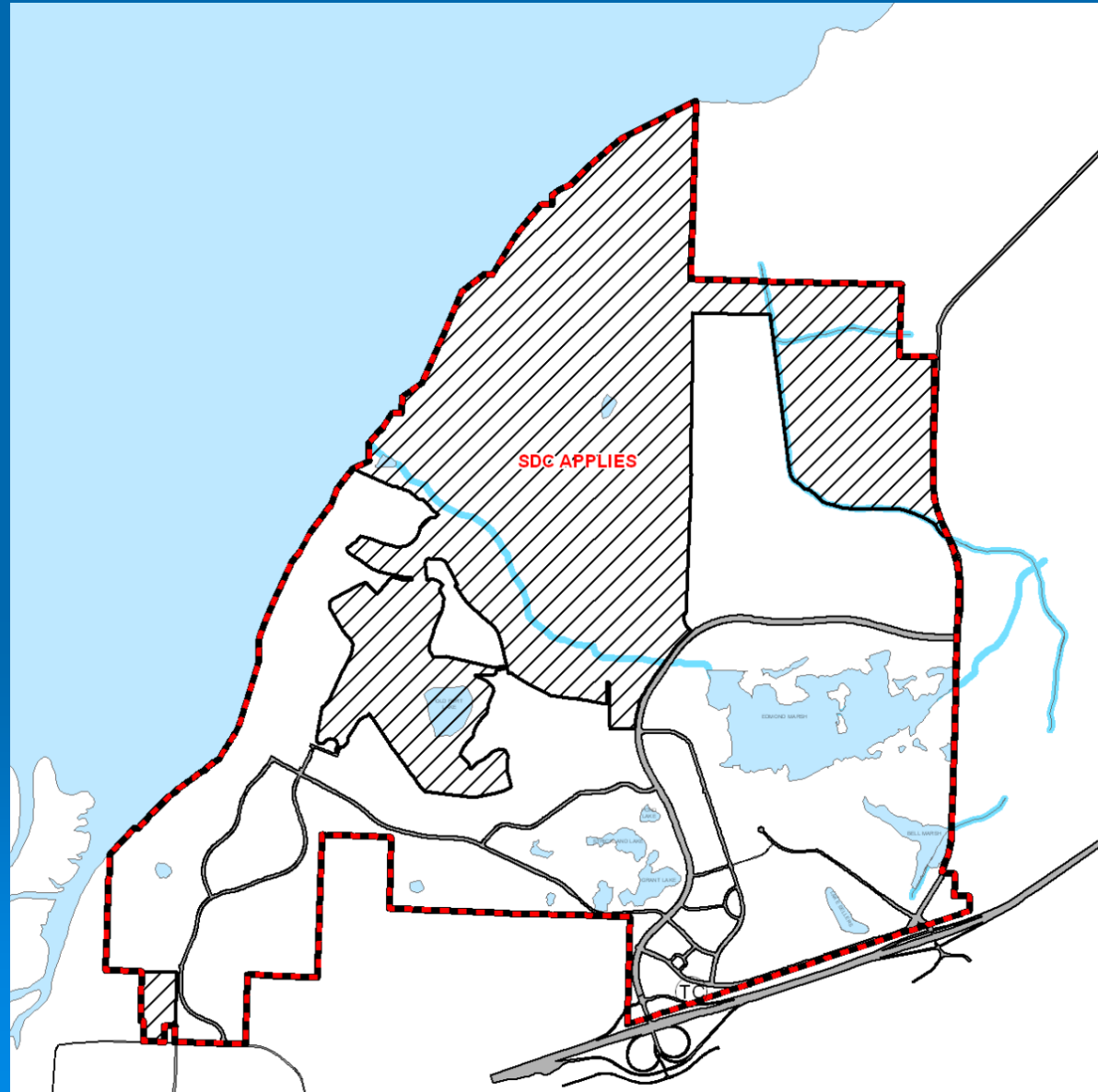
Operation and Maintenance Cost	\$12,543
Annual Depreciation (50%)	\$43,794
Total	\$56,337

Method of Funding Fire Protection

- General Fund
- City Utility Tax 12% – \$260,000 (2016 value)

System Development Charge

SDC Area



SDC – Existing Facilities

Water Mains (8"–16")	\$19,944,300
Valves (8"–16")	\$ 1,471,300
Hydrants (less fire protection)	\$ 1,327,000
Reservoir (less fire storage)	\$ 1,440,300
Wells	\$ 0
Booster Station	<u>+\$ 1,143,600</u>
Subtotal	\$25,326,500
Less Debt, PWTF	\$ (190,508)
ERUs ⁽¹⁾	<u>÷ 9,016</u>
SDC	\$ 2,788

(1) Equivalent Residential Unit (ERU) is based on the water demands of a single-family home (223 gallons/day from 2011 Water Plan).

SDC – Planned Facilities

Description	Year Planned	2016 Cost	ERUs ⁽¹⁾	Cost/ERU
Rebuild Well Houses at Bell Hill, Well #1, & Well #2	2016	\$20,000	9,016	\$2.22
Replacement of CL2 Delivery System at Bell Hill With MIOX	2016	\$50,000	9,016	\$5.55
Hoffman Hill Booster Pump Upgrades	2016	\$180,000	9,016	\$19.96
2,600 LF of Historic Village Water Mains	2016	\$434,480	9,016	\$48.19
1,200 LF near Wilmington Apartments	2016	\$200,640	9,016	\$22.25
Security at Water Facilities	2016	\$25,000	9,016	\$2.77
Water Meter Radio Read System (2)	2018	\$200,000	9,016	\$22.18
Recoat Hoffman Hill Reservoir (2)	2019	\$660,000	9,016	\$73.20
Recoat Bell Hill Reservoir	2020	\$320,000	9,016	\$35.49
Total, 2016-2020		\$2,090,120		\$231.82

- (1) Equivalent Residential Unit (ERU) is based on the water demands of a single-family home (223 gallons/day from 2011 Water Plan).
- (2) Debt funded portion of improvement not included in SDC.

SDC - Maximum

Existing Facilities	\$2,788
Planned Facilities	\$ 232
Less Outstanding Debt/ERU	\$ (11)
Total	\$3,009

SDC Comparison

Community	Single Family	1 Inch	1-1/2 Inches	2 Inches
DuPont (proposed)	\$2,888	\$4,823 ⁽²⁾	\$9,646 ⁽²⁾	\$15,393 ⁽²⁾
Gig Harbor	\$7,300	\$12,191	\$24,309	\$38,909
Lacey	\$3,842	\$7,698	\$15,329	\$25,035
Lakewood	\$2,135	\$10,674	\$17,079	\$34,158
Olympia	\$3,687	\$6,160	\$12,282	\$19,659
Puyallup ⁽¹⁾	\$3,130	—	—	—
Steilacoom	\$1,155	\$2,888	\$5,776	\$9,241
Thurston County ⁽¹⁾	\$2,199	—	—	—
Yelm ⁽¹⁾	\$5,036	—	—	—

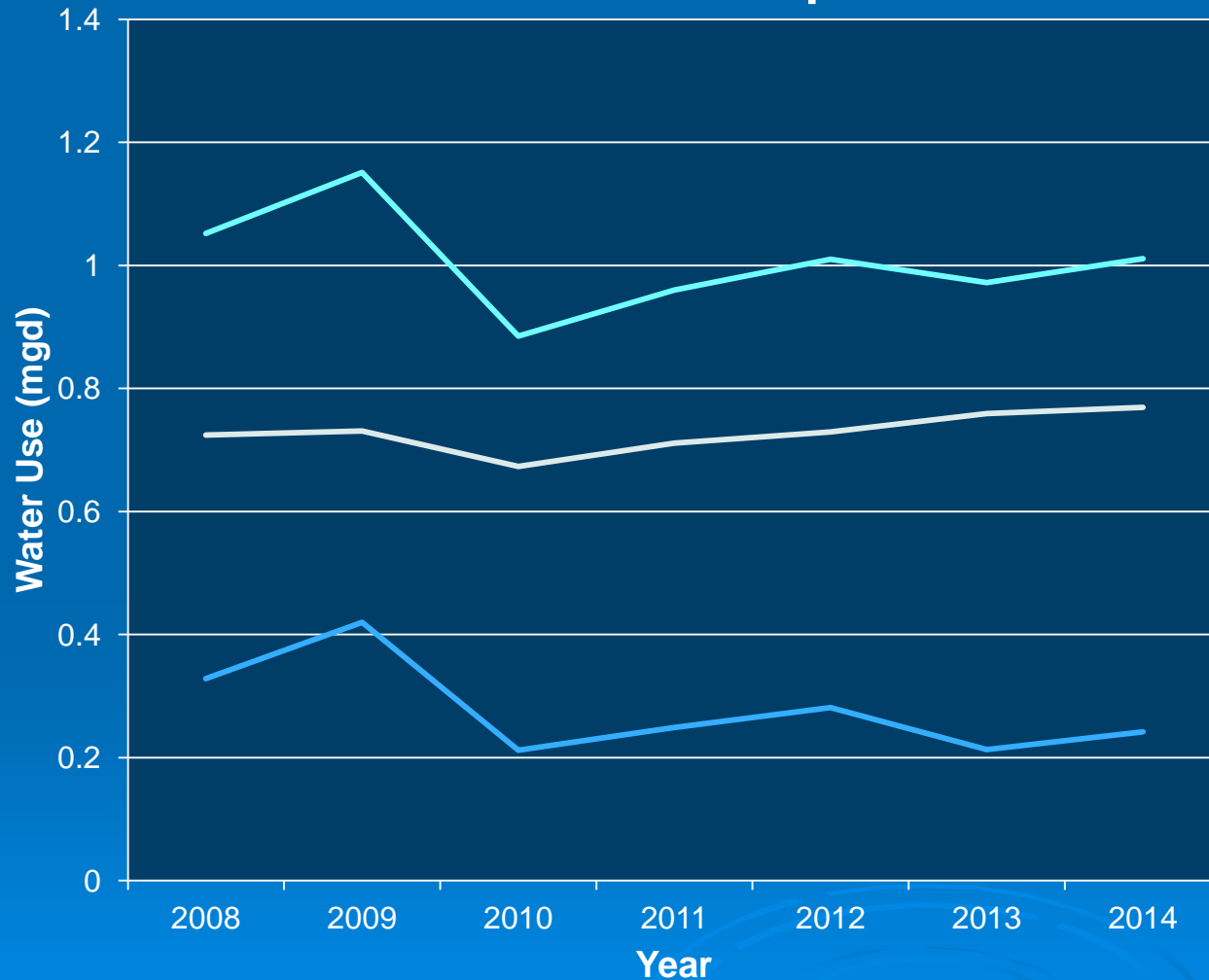
(1) Charge based on fixture counts versus meter size for commercial facilities.

(2) The SDC is based on the single-family SDC times the meter equivalent for the meter size.

Rates

Water Consumption

Annual Consumption



— Domestic
— Irrigation
— Total

Year	Domestic (mgd)	Irrigation (mgd)	Total (mgd)
2008	.724	.328	1.052
2009	.731	.420	1.151
2010	.673	.212	0.885
2011	.711	.249	0.960
2012	.729	.281	1.010
2013	.759	.213	0.972
2014	.769	.242	1.011

Rate Assumptions

Growth	0%
Inflation	2.3%
Interest	0.2%
COLA	3%
Excise Tax	5.029%
Utility Tax	12%
Insurance Increase	4%
FTE (2016, 2019)	2
SDC	\$2,888

Additional FTEs

- 2016: Hire 1 Full Time Employee (FTE)
- 2019: Hire 1 FTE
- Duties and Tasks
 - Maintenance worker; execute planned and unplanned work on the water system
 - Routine inspection of the water system components
 - Leak detection
 - Quality Control

Capital Improvement Projects (2016–2020)

Description	Year Planned	2016 Cost
Rebuild Well Houses at Bell Hill, Well #1, & Well #2	2016	\$20,000
Replacement of CL2 Delivery System at Bell Hill With MIOX	2016	\$50,000
Hoffman Hill Booster Pump Upgrades	2016	\$180,000
2,600 LF of Historic Village Water Mains	2016	\$434,480
1,200 LF near Wilmington Apartments	2016	\$200,640
Security at Water Facilities	2016	\$25,000
Historic Village Reservoir Demolition	2017	\$170,000
Water Meter Radio Read System ⁽¹⁾	2018	\$1,000,000
Recoat Hoffman Hill Reservoir ⁽¹⁾	2019	\$1,650,000
Recoat Bell Hill Reservoir	2020	\$320,000
Total, 2016-2020		\$4,050,120

(1) Funded by Revenue Bond

Debt Assumptions

	Financing	Debt Funded	Term	Interest
Water Meter Radio Read System	Revenue Bond	80%	20 years	4%
Recoat Hoffman Hill Reservoir	Revenue Bond	60%	20 years	4%

2015 System Replacement Cost

Total Replacement Costs (Less Meters)	\$46,184,334
Annual Depreciation Cost (Less Meters and Fire Protection)	\$ 798,748

Annual Capital Reserve Contribution

	Annual Depreciation (25%)
2011 – 2015 ⁽¹⁾	\$168,802
	Annual Depreciation (50%)
2016	\$357,217
2017	\$367,934
2018	\$378,972
2019	\$390,342
2020	\$402,051

(1) One-time initial transfer of \$2,000,000 in 2015

Water Fund End-of-Year Balance

Year	Cash	Reserves
2015	\$1,414,854	\$2,000,000
2016	\$1,459,092	\$1,521,491
2017	\$1,304,521	\$1,937,225
2018	\$1,259,267	\$2,157,621
2019	\$1,169,949	\$1,866,235
2020	\$644,429	\$2,332,046

Existing and Proposed Monthly Water Rates

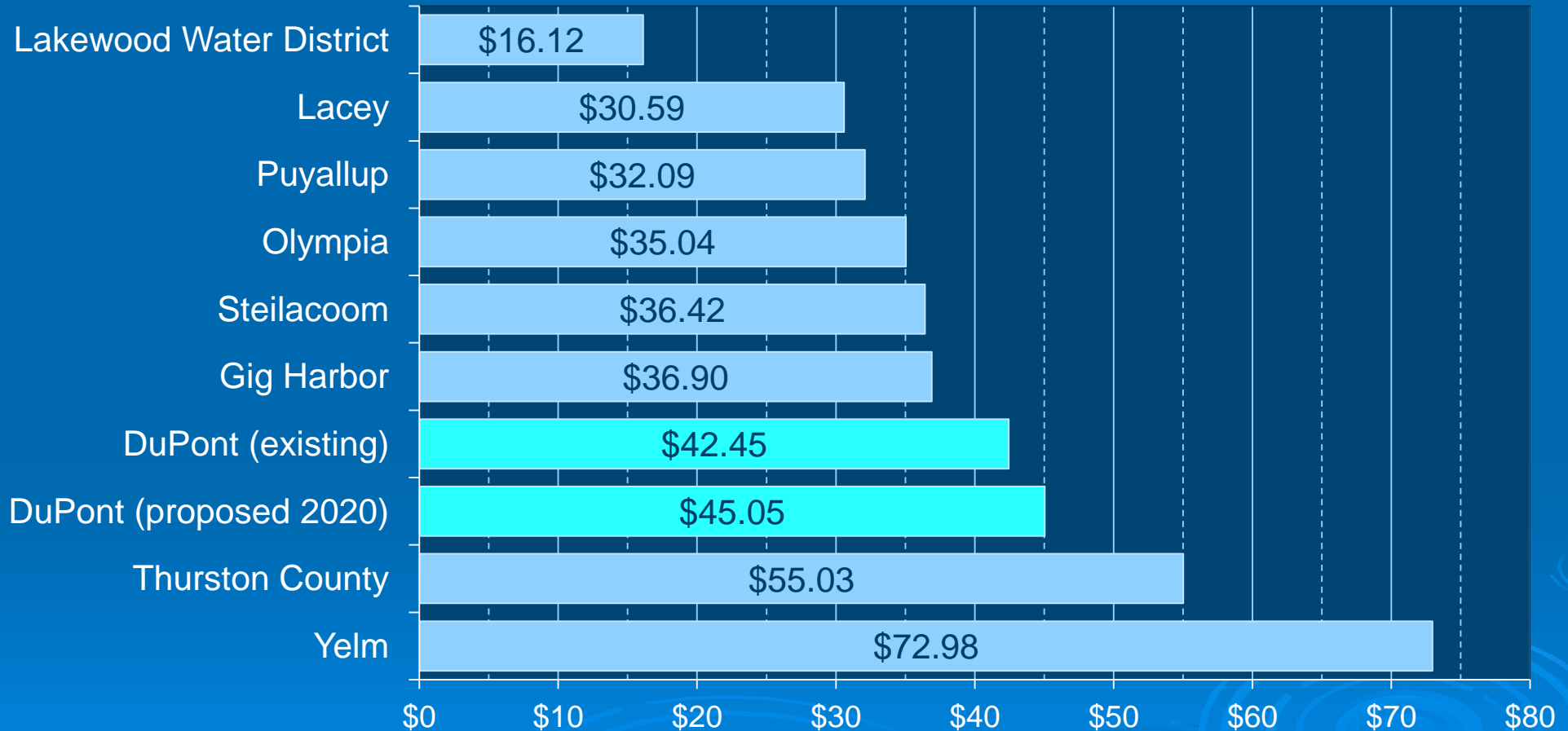
	ME ⁽¹⁾	2015	2016	2017	2018	2019	2020
Percent Increase		0%	0%	0%	2%	2%	2%
Single Family (includes 5 ccf)	1	\$31.45	\$31.45	\$31.45	\$32.08	\$32.72	\$33.37
Non-Single Family 3/4 inch (includes 5 ccf)	1	\$31.45	\$31.45	\$31.45	\$32.08	\$32.72	\$33.37
1 inch	1.67	\$52.52	\$52.52	\$52.52	\$53.57	\$54.64	\$55.74
1-1/2 inches	3.34	\$105.04	\$105.04	\$105.04	\$107.14	\$109.29	\$111.47
2 inches	5.33	\$167.63	\$167.63	\$167.63	\$170.98	\$174.40	\$177.89
Volume (>5 ccf) ⁽²⁾	—	\$2.20/ ccf	\$2.20/ ccf	\$2.20/ ccf	\$2.24/ ccf	\$2.29/ ccf	\$2.33/ ccf

(1) Meter Equivalent (ME) is based on flow capacity through a 3/4-inch meter.

(2) 5 CCF included in base rates; 1 CCF is 100 cubic feet or 748 gallons.

Water Rate Comparison 2015

Monthly Single Family Rates, 2015⁽¹⁾



(1) Single Family using 10 ccf/month is assumed for comparison purposes.

Proposed Sample Bi-monthly Bills

Property Owner	Bimonthly ⁽¹⁾		
	2015 Rate ⁽²⁾	2020 Rate	Difference
State Farm	\$8,225	\$8,728	\$503
Intel	\$6,173	\$6,551	\$378
Chloe Clark Elementary School	\$2,216	\$2,352	\$136
Girl Scouts of Western Washington	\$678	\$720	\$42
DuPont Post Office	\$275	\$291	\$17
Blackhawk Condo Association	\$1,527	\$1,620	\$93
Single-Family (average water use)	\$85	\$90	\$5
Single-Family (high water use)	\$300	\$319	\$19

(1) Billing cycle is bimonthly.

(2) Rate assumes average annual water use for 2014.

Water Utility Recommendations Council to Confirm

- Maintain existing rate structure
- Increase from 25% to 50% depreciation for capital reserves
- Rate increase in 2018, 2019, and 2020
- Adopt rates for 2016–2020